Attorney Docket No: 03528.0149.PCUS00

In the Claims:

1. (Original) An AAV vector characterized in that it carries at least one mutation resulting in a heparin-binding motif of a capsid protein being located within an positions 470 to 592 showing a reduced or eliminated heparin binding function.

2. (Original) The AAV vector of claim 1, wherein said mutation results in an amino acid substitution of the capsid protein at an position:

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(b) arginine 484;

(c) arginine 487;

(d) lysine 527;

(e) lysine 532;

(f) arginine 585; and/or

(g) arginine 588.

3. (Original) The AAV vector of claim 2, wherein said amino acid substitution is a non-conservative amino acid substitution

4. (Original) The AAV vector of claim 3 with the capsid protein being characterized by at least one of the following amino acid substitutions.

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(a) R475A;
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(b) R484A or R484E;

(c) R487A or R487E;

(d) K527A;

(e) K532A;

(f) R585E; and/or

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- (g) R588E.
- 5. (Original) The AAV vector of claim 4 with the capsid protein being characterized by the amino acid substitutions R484E and/or 585E.
- 6. (Currently Amended) The AAV vector of any one of claims 1 to 5 claim 1, which is an AAV-2 vector.
- 7. (Currently Amended) An AAV particle having a capsid encoded by an AAV vector of any one of claims 1 to 6 claim 1.
- 8. (Currently Amended) A pharmaceutical composition containing an AAV vector of any one of Claims 1 to 6 or an AAV particle of Claim 7 claim 1.
- 9. (Currently Amended) Use of an AAV vector of any one of claims 1 to 6 or an AAV particle of Claim 7 claim 1 for gene therapy of non-hepatic tissue.
- 10. (Original) The use according to Claim 9, wherein said non-hepatic tissue is heart muscle tissue.